

Patent Claims

1. A control device for signal lamps of a vehicle, comprising
 - a) a signalling circuit for generating an intermittent signal current as load current for the signal lamps, and
 - b) a signal switch for activating the signalling circuit, wherein:
 - c) a clock circuit is provided which controls the load current of at least two signal lamps individually in each case with the aid of a prescribed clock sequence, and
 - d) acting as an operating voltage source for the clock circuit, the signalling circuit feeds the clock circuit the intermittent signal current.
2. The control device according to claim 1, wherein the clock circuit is designed as a microcontroller, and a clock sequence can be programmed for each signal lamp to be driven by the microcontroller.
3. The control device according to claim 2, wherein the purpose of being driven with the aid of the prescribed clock sequence each signal lamp is connected to an output stage circuit, and these output stage circuits are driven via the control outputs of the microcontroller.
4. The control device according to claim 3, wherein the output stage circuits are designed as low-side switches, each signal lamp being connected, on the one hand, to the associated output stage circuit and, on the other hand, via a series resistor to the signalling circuit for the purpose of feeding the intermittent signal current.

5. The control device according to claim 3, wherein the output stage circuits are designed as high-side switches, each signal lamp being connected, on the one hand, to the associated output stage circuit and, on the other hand, to the reference potential of the control circuit.

6. The control device according to claim 1, wherein the clock sequences prescribed for the respective load current of the signal lamps lead to a running light effect in the case of the signal lamps driven by the clock circuit.

7. The control device according to claim 1 wherein the signalling circuit is designed as a flasher circuit, and the signal switch is designed as a turn flasher switch.

8. The control device according to claim 7, wherein a further signal switch is designed as a hazard warning switch.

9. A method for operating the control device according to claim 1, in which the load current, clocked by the prescribed clock sequence, of the signal lamps is pulse-width-modulated during the time of their bright phase.

10. Use of the control device according to claim 1 for a mirror-mounted flasher having a plurality of signal lamps in the case of which the clock circuit is also arranged on a carrier board in addition to the signal lamps.

11. A vehicle lighting system, comprising:
a first switching element;

a first control device to generate a first signal in response to a state of said first switching element;

an electroluminescent device; and

a second control device to generate a second signal for driving said electroluminescent device in response to said first signal.

12. The vehicle lighting system of claim 11, wherein said first switching element comprises a one-pole-two-throw switch used to selectively indicate a direction of turning of a vehicle.

13. The vehicle lighting system of claim 12, wherein said electroluminescent device comprises a left-turn-indicating electroluminescent device and a right-turn-indicating electroluminescent.

14. The vehicle lighting system of claim 11, wherein said first switching element comprises a two-pole-two-throw switch used to selectively indicate a hazard situation related to a vehicle.

15. The vehicle lighting system of claim 14, wherein said electroluminescent device comprises a first hazard-indicating electroluminescent device and a second hazard-indicating electroluminescent device.

16. The vehicle lighting system of claim 11, wherein said first control device comprises a microprocessor.

17. The vehicle lighting system of claim 11, wherein said first signal is substantially periodic.

18. The vehicle lighting system of claim 11, wherein said electroluminescent device comprises a light-emitting diode (LED).

19. The vehicle lighting system of claim 11, wherein said electroluminescent device comprises an incandescent device.

20. The vehicle lighting system of claim 11, wherein said second control device comprises a microcontroller.

21. The vehicle lighting system of claim 11, wherein said electroluminescent device comprises a plurality of electroluminescent devices, and wherein said second signal drives said plurality of electroluminescent devices in a predetermined time pattern.

22. The vehicle lighting system of claim 11, wherein said second control device pulse-width-modulates said second signal to control a brightness of said electroluminescent device.

23. A method of activating a vehicle lighting system, comprising:

generating a first signal in response to a state of a first switching element;

generating a second signal in response to said first signal; and

activating an electroluminescent device using said second signal.

24. The method of claim 23, wherein said

electroluminescent device is used to indicate that a vehicle is turning left or right.

25. The method of claim 23, wherein said electroluminescent device is used to indicate a hazard condition related to a vehicle.

26. The method of claim 23, wherein said first signal is substantially periodic.

27. The method of claim 23, wherein said electroluminescent device comprises a plurality of electroluminescent devices, and wherein said second signal drives said plurality of electroluminescent devices in a predetermined pattern.

28. The method of claim 23, further comprising modulating said second signal to control a brightness of said electroluminescent device.

29. The method of claim 28, wherein modulating said second signal comprises pulse-width modulating said second signal.